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The prevalence and severity of burnout syndrome among school teachers in Makkah city, Saudi Arabia: A cross sectional study

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ABSTRACT

Background and aim: Burnout syndrome (BS) is described by emotional exhaustion, depersonalization and a lack of personal accomplishment. It is now recognized as a syndrome affecting a broader range of professions. Teaching is a profession with numerous job related stressors. In this study, we aimed to determine the prevalence of BS among primary and secondary school teachers in Makkah, Saudi Arabia. **Methodology:** Using a standardized questionnaire, a cross sectional study of Makkah city population in Saudi Arabia was carried out. Any primary, secondary and high school teachers in Makkah, male and female, Saudi or not, met the inclusion criteria. In this study, burnout was measured using The Maslach Burnout Scale (MBS). Data were extracted, reviewed, coded, and then entered in to statistical software IBM SPSS version 22. (SPSS, Inc Chicago, IL) P value less than 0.05 was considered statistically significant. **Result:** The study survey was completed by 354 teachers in total. The exact 228 (64.4%) teachers were females (36.7%) of the teachers who experienced high BS levels. BS was significantly higher among young aged teachers (42.2% vs. 23.7%) and female teachers (42.1% vs. 27%). Also, there's a significant association between the number of classes per week and BS, additional factors included social issues, chronic diseases and the fear of being forced to work. **Conclusion:** BS is wide spread among teachers, as evidenced by the fact that 36% of respondents scored highly for (BS). These results demonstrate the requirement for programs to support teachers' mental health in order to improve the educational process.

Keywords: Burnout, School Teachers, Saudi Arabia.

1. INTRODUCTION

On the basis of the Cognitive Activation Theory of Stress (Ursin and Eriksen, 2004), Individuals' health is determined by how efficiently they adapt to

psychosocial, environmental and physical difficulties. The response to such threats to an individual's psychological or physiological integrity is known as stress, and it seeks to preserve physiological balance and, as a result, improve survival and reproductive success. From this view point, teaching profession stands out as one of the most exhausted jobs with the ability to induce poor health (Johnson et al., 2005). Burnout can literally be defined as "to be consumed or burned up." Feelings of tiredness or depletion are also included in the word. Burnout is a term used in the work place to describe work related stress, which provides for feelings of physical and mental tiredness, impatience, loss of interest in work and low self worth (Ribeiro et al., 2021). Burnout syndrome (BS), which is an undesirable psychological state marked by weariness, cynicism and feelings of lost professional efficacy, is one stress related consequence teachers may face (Arvidsson et al., 2016). Although BS is still mainly studied in the medical industry, it is now acknowledged as a syndrome impacting a far wider variety of professions, including teaching, which has multiple job related stressors, most of which occur on a daily basis (Ptáček et al., 2019).

Concerning several causes and contributing variables, there has been a considerable increase in mental disorders among workers, notably teachers, in recent years. These reasons include a rise in work pace, a decrease in the number of teachers, an increase in tasks and the assumption of new responsibilities. Additional stressors teachers must deal with include parental pressure and often unreasonable societal expectations (Brown et al., 2002). Every one of these factors could lead to emotional stress. At the same time, teachers are expected to control their own emotions, i.e., demands of hiding emotions (Johnson et al., 2005). Therefore, the study of this syndrome arose primarily because of the consequences that can affect the worker's health (Marić et al., 2020).

A survey statistic showed that 10–40 percent of teachers in Western and some Eastern European nations suffer burnout, while 50–70 percent of teachers in Asian countries suffer burnout (Al-Asadi et al., 2018). According to a recent systematic study and meta-analysis, many school teachers suffer from burnout. In particular, 28.1 % experience severe emotional tiredness, 37.9 % experience extreme levels of depersonalization and 40.3 % low experience levels of personal achievement (García-Carmona et al., 2019). Understanding the prevalence of BS among teachers is essential to identify risk factors for poor mental outcomes that can aid in better assessment, targeted prevention and intervention programs, potentially minimizing the risk for adverse health outcomes among teachers and their students (Ozoemena et al., 2021). However, little is known about the prevalence of burnout and associated factors among school teachers in Saudi Arabia. Accordingly, this study's goal is to find out the prevalence of BS among school teachers in Makkah, Saudi Arabia.

2. MATERIALS AND METHODS

This cross sectional study was performed using a structured questionnaire in Makkah city population, Saudi Arabia. The study was concluded over three months, starting in February to May 2022, after obtaining ethical approval from UQU's research ethics committee (HAPO -02-K-012-2022-03-1005). The inclusion criteria were any primary, secondary and high school teachers in Makkah, male and female, either Saudi or non Saudi. Exclusion criteria included any teacher participants who did not complete the survey and were diagnosed with psychiatric disorders such as depression, general anxiety, bipolar and schizophrenia. A quantitative study of school teachers was started in February 2022 in Makkah, Saudi Arabia. The study population is expected to be 20000 teachers. The sample size required to detect a significant effect with a 95% confidence interval in a finite population would be 377 teachers. After three months of data collection, 354 teachers participated. Data were collected from Makkah city school teachers through an online questionnaire. The questionnaire included the following socio-demographic data: Gender, age, marital status, children number, nationality, chronic diseases, psychiatric diseases, social problems, income, school type (elementary, secondary or high school), governmental or private school, specialty, number of classes per week, years of service and the teachers were asked to indicate if they are forced to do this job or not. This study measured burnout using The Maslach Burnout Scale (MBS), modified and adopted from reviewed literature; an English version was translated in to Arabic. To ensure consistency, one independent bilingual reviewer checked the Arabic translation. There are 22 Likert type items in this scale, separated into three subscales: Emotional exhaustion (burnout) (nine items), depersonalization (five items), and professional accomplishment (eight items), formed in multiple choice patterns ranging from 0 to 6 choices; indicate how frequently the statement applied to them (0=never, 6=everyday). All participants in our study were given detailed information about the study's goals and all participants who were inclined to participate in the study provided informed consent before completing the questionnaires.

Data analysis

Data were revised, coded and entered into statistical software IBM SPSS version 22 after being extracted (SPSS, Inc Chicago, IL). Two tailed tests were used for all statistical analysis P value lower than 0.05 was statistically significant. As for burnout, Maslach Burnout Inventory Student Survey (MBI-SS) discrete scores for different domains were calculated and categorized in to low,

moderate and high levels according to documented scale cutoff points (1, 2). Descriptive analysis using frequency distribution with percent was done for participants' personal data, work data, experience years, medical history, social problems and degree of burnout. Cross tabulation was done in order to evaluate the distribution of study participants' degree of burnout for the three domains (EE, DP and PA) by their different bio-demographic and work related data. The significance of relations was tested using Pearson's Chi square test and the exact probability test for small frequency distributions.

3. RESULTS

A total of 354 school teachers completed the study survey. Teachers' ages ranged from 24 to 60 years, with a mean age of 45.5 ± 6.6 . The exact 228 (64.4%) teachers were females, 297 (83.9%) were married and 34 (9.6%) were divorced / widows. A total of 171 (48.3%) had four children or more, 127 (35.9%) had 1-3 children and 56 (15.8%) had no children. The income was insufficient among 303 (85.6%) teachers. A total of 45 (12.7%) were diagnosed with hypertension, 42 (11.9%) were diabetic and 257 (72.8%) had no chronic health problems. Also, 10 (2.8%) teachers had social problems related to family, while one teacher had debts and 1 had introversion (Table 1).

Table 1 Bio-demographic data of study school teachers in Makkah city, Saudi Arabia

Bio-demographic data	No	%
Age in years		
< 40	64	18.1%
40-49	176	49.7%
50+	114	32.2%
Gender		
Male	126	35.6%
Female	228	64.4%
Marital status		
Single	23	6.5%
Married	297	83.9%
Divorced / widow	34	9.6%
Number of children		
None	56	15.8%
1-3	127	35.9%
4+	171	48.3%
Income level		
Sufficient	51	14.4%
Insufficient	303	85.6%
Chronic diseases		
None	257	72.8%
Diabetes mellitus	42	11.9%
Hypertension	45	12.7%
Hypothyroidism	9	2.5%
Others	20	5.7%
Social problems		
None	342	96.6%
Family issues	10	2.8%
introversion	1	.3%
Debts	1	.3%

Table 2 Work related data of study school teachers in Makkah city, Saudi Arabia. A total of 345 (97.5%) teachers worked at governmental schools, 136 (38.4%) were teaching in the elementary phase, 125 (35.3%) were teaching in the middle phase and 93

(26.3%) were teaching in the high phases. Regarding teaching experience, 199 (56.2%) teachers work for more than 20 years, 127 (35.9%) teach for 10-19 years and 28 (7.9%) teach for less than ten years. As for the number of classes per week, 106 (29.9%) teachers had more than 20 classes per week, 155 (43.8%) had 16-20 classes per week, and 71 (20.1%) had 8-15 classes per week. 119 (33.6%) teachers thought that they were forced to do this job.

Table 2 work related data of study school teachers in Makkah city, Saudi Arabia

Work data	No	%
School type		
Governmental	345	97.5%
Private	9	2.5%
Teaching phase		
Elementary	136	38.4%
Middle	125	35.3%
High	93	26.3%
How long have you been teaching?		
< 10 years	28	7.9%
10-19 years	127	35.9%
20 years or more	199	56.2%
Number of classes per week		
< 7	22	6.2%
8-15	71	20.1%
16-20	155	43.8%
> 20	106	29.9%
Are you forced to do this job?		
Yes	119	33.6%
No	235	66.4%

Table 3 Burnout among study school teachers in Makkah city, Saudi Arabia regarding BS it was low among 31.1% of the study teachers, moderate among 32.2%, while 36.7% of the teachers experienced high BS levels. Depersonalization/loss of empathy (DP) was low among 51.1% of the study teachers and moderate among 29.4%, while 19.5% complained of high DP and loss of empathy. Regarding Personal accomplishment (PA), 63.8% of the teachers had a low level of PA, 20.6% experienced moderate PA and 15.5% experienced a high PA level (Figure 1).

Table 3 Burnout among study school teachers in Makkah city, Saudi Arabia

Burnout domains	Low degree		Moderate degree		High degree	
	No	%	No	%	No	%
Occupational exhaustion	110	31.1%	114	32.2%	130	36.7%
Depersonalisation / loss of empathy	181	51.1%	104	29.4%	69	19.5%
Personal accomplishment	226	63.8%	73	20.6%	55	15.5%

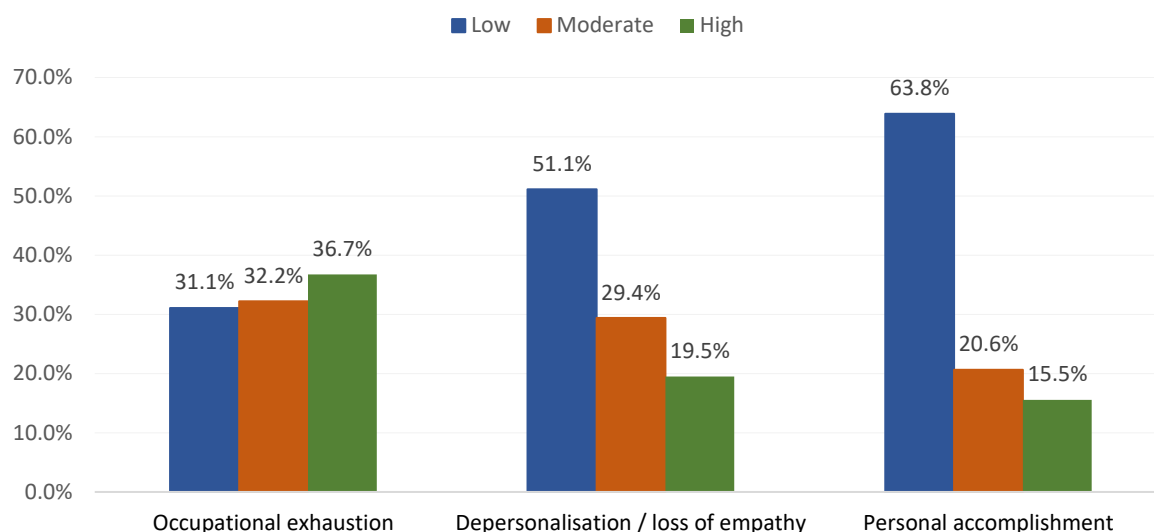


Figure 1 Burnout among study school teachers in Makkah city, Saudi Arabia

Table 4 Factors associated with BS among study teachers in Makkah, Saudi Arabia. BS was significantly higher among young aged teachers (42.2% vs. 23.7%), female teachers (42.1% vs. 27%), teachers with sufficient income (64.7% vs. 32%), teachers with chronic diseases (45.8% vs. 33.3%), teachers with social problems (75% vs. 35.4%), teachers with a higher rate of classes per week (51.9% vs. 22.7%) and teachers who were forced for that job (61.3% vs. 24.3%).

Table 4 Factors associated with occupation exhaustion among study teachers in Makkah, Saudi Arabia

Factors		Occupational exhaustion						p-value
		Low degree		Moderate degree		High degree		
		No	%	No	%	No	%	
Age in years	< 40	14	21.9%	23	35.9%	27	42.2%	.001*
	40-49	43	24.4%	57	32.4%	76	43.2%	
	50+	53	46.5%	34	29.8%	27	23.7%	
Gender	Male	48	38.1%	44	34.9%	34	27.0%	.014*
	Female	62	27.2%	70	30.7%	96	42.1%	
Marital status	Single	4	17.4%	5	21.7%	14	60.9%	.102
	Married	92	31.0%	99	33.3%	106	35.7%	
	Divorced / widow	14	41.2%	10	29.4%	10	29.4%	
Number of children	None	19	33.9%	13	23.2%	24	42.9%	.438
	1-3	39	30.7%	39	30.7%	49	38.6%	
	4+	52	30.4%	62	36.3%	57	33.3%	
Income level	Sufficient	7	13.7%	11	21.6%	33	64.7%	.001*
	Insufficient	103	34.0%	103	34.0%	97	32.0%	
Chronic diseases	Yes	31	32.3%	21	21.9%	44	45.8%	.025*
	No	79	30.6%	93	36.0%	86	33.3%	
Social problems	Yes	1	8.3%	2	16.7%	9	75.0%	.019*§
	No	109	31.9%	112	32.7%	121	35.4%	
School type	governmental	108	31.3%	111	32.2%	126	36.5%	.824
	private	2	22.2%	3	33.3%	4	44.4%	
Teaching phase	Elementary	38	27.9%	40	29.4%	58	42.6%	.344
	Middle	40	32.0%	40	32.0%	45	36.0%	
	High	32	34.4%	34	36.6%	27	29.0%	

How long have you been teaching?	< 10 years	5	17.9%	6	21.4%	17	60.7%	.057
	10-19 years	36	28.3%	43	33.9%	48	37.8%	
	20 years or more	69	34.7%	65	32.7%	65	32.7%	
Number of classes per week	< 7	10	45.5%	7	31.8%	5	22.7%	.002*
	8-15	29	40.8%	24	33.8%	18	25.4%	
	16-20	43	27.7%	60	38.7%	52	33.5%	
	> 20	28	26.4%	23	21.7%	55	51.9%	
Are you forced to do this job?	Yes	13	10.9%	33	27.7%	73	61.3%	.001*
	No	97	41.3%	81	34.5%	57	24.3%	

P: Pearson X² test \$: Exact probability test * P < 0.05 (significant)

Table 5 Factors associated with depersonalization among study teachers in Makkah, Saudi Arabia. DP was significantly higher among young aged teachers (29.7% vs. 13.2%), teachers with sufficient income (41.2% vs. 15.8%), teachers with a higher rate of classes per week (29.2% vs. 22.7%) and teachers who were forced for that job (37% vs. 10.6%).

Table 5 Factors associated with depersonalization among study teachers in Makkah, Saudi Arabia

Factors		Depersonalisation / loss of empathy						P- value
		Low degree		Moderate degree		High degree		
		No	%	No	%	No	%	
Age in years	< 40	28	43.8%	17	26.6%	19	29.7%	.001*
	40-49	77	43.8%	64	36.4%	35	19.9%	
	50+	76	66.7%	23	20.2%	15	13.2%	
Gender	Male	70	55.6%	36	28.6%	20	15.9%	.349
	Female	111	48.7%	68	29.8%	49	21.5%	
Marital status	Single	9	39.1%	8	34.8%	6	26.1%	.411
	Married	150	50.5%	89	30.0%	58	19.5%	
	Divorced / widow	22	64.7%	7	20.6%	5	14.7%	
Number of children	None	30	53.6%	18	32.1%	8	14.3%	.773
	1-3	65	51.2%	34	26.8%	28	22.0%	
	4+	86	50.3%	52	30.4%	33	19.3%	
Income level	Sufficient	16	31.4%	14	27.5%	21	41.2%	.001*
	Insufficient	165	54.5%	90	29.7%	48	15.8%	
Chronic diseases	Yes	46	47.9%	24	25.0%	26	27.1%	.081
	No	135	52.3%	80	31.0%	43	16.7%	
Social problems	Yes	3	25.0%	5	41.7%	4	33.3%	.172 ^s
	No	178	52.0%	99	28.9%	65	19.0%	
School type	governmental	176	51.0%	102	29.6%	67	19.4%	.891
	private	5	55.6%	2	22.2%	2	22.2%	
Teaching phase	Elementary	70	51.5%	34	25.0%	32	23.5%	.361
	Middle	63	50.4%	38	30.4%	24	19.2%	
	High	48	51.6%	32	34.4%	13	14.0%	
How long have you been teaching?	< 10 years	10	35.7%	9	32.1%	9	32.1%	.323
	10-19 years	63	49.6%	39	30.7%	25	19.7%	
	20 years or more	108	54.3%	56	28.1%	35	17.6%	
Number of classes per week	< 7	15	68.2%	2	9.1%	5	22.7%	.012*
	8-15	42	59.2%	21	29.6%	8	11.3%	

	16-20	77	49.7%	53	34.2%	25	16.1%	
	> 20	47	44.3%	28	26.4%	31	29.2%	
Are you forced to do this job?	Yes	38	31.9%	37	31.1%	44	37.0%	.001*
	No	143	60.9%	67	28.5%	25	10.6%	

P: Pearson X² test \$: Exact probability test * P < 0.05 (significant)

Table 6 Factors associated with Personal accomplishment among study teachers in Makkah, Saudi Arabia. DP was significantly higher among divorced teachers than others (32.4% vs. 4.3%). Other factors were insignificantly associated with burnout among study teachers.

Table 6 Factors associated with Personal accomplishment among study teachers in Makkah, Saudi Arabia

Factors		Personal accomplishment						p-value
		Low degree		Moderate degree		High degree		
		No	%	No	%	No	%	
Age in years	< 40	43	67.2%	10	15.6%	11	17.2%	.138
	40-49	120	68.2%	31	17.6%	25	14.2%	
	50+	63	55.3%	32	28.1%	19	16.7%	
Gender	Male	82	65.1%	24	19.0%	20	15.9%	.862
	Female	144	63.2%	49	21.5%	35	15.4%	
Marital status	Single	18	78.3%	4	17.4%	1	4.3%	.033*\$
	Married	190	64.0%	64	21.5%	43	14.5%	
	Divorced / widow	18	52.9%	5	14.7%	11	32.4%	
Number of children	None	38	67.9%	13	23.2%	5	8.9%	.505
	1-3	83	65.4%	22	17.3%	22	17.3%	
	4+	105	61.4%	38	22.2%	28	16.4%	
Income level	Sufficient	32	62.7%	8	15.7%	11	21.6%	.348
	Insufficient	194	64.0%	65	21.5%	44	14.5%	
Chronic diseases	Yes	59	61.5%	19	19.8%	18	18.8%	.596
	No	167	64.7%	54	20.9%	37	14.3%	
Social problems	Yes	6	50.0%	2	16.7%	4	33.3%	.223\$
	No	220	64.3%	71	20.8%	51	14.9%	
School type	governmental	221	64.1%	69	20.0%	55	15.9%	.130
	private	5	55.6%	4	44.4%	0	0.0%	
Teaching phase	Elementary	82	60.3%	31	22.8%	23	16.9%	.089
	Middle	91	72.8%	17	13.6%	17	13.6%	
	High	53	57.0%	25	26.9%	15	16.1%	
How long have you been teaching?	< 10 years	20	71.4%	5	17.9%	3	10.7%	.596
	10-19 years	86	67.7%	24	18.9%	17	13.4%	
	20 years or more	120	60.3%	44	22.1%	35	17.6%	
Number of classes per week	< 7	15	68.2%	5	22.7%	2	9.1%	.962
	8-15	43	60.6%	17	23.9%	11	15.5%	
	16-20	99	63.9%	31	20.0%	25	16.1%	
	> 20	69	65.1%	20	18.9%	17	16.0%	
Are you forced to do this job?	Yes	79	66.4%	20	16.8%	20	16.8%	.442
	No	147	62.6%	53	22.6%	35	14.9%	

P: Pearson X² test \$: Exact probability test * P < 0.05 (significant)

4. DISCUSSION

The study concluded that the prevalence of BS is 36.7% among school teachers in Makkah, Saudi Arabia. In addition, the result showed significantly higher scores among participants with the following socio-demographic characteristic, being young, female, having chronic diseases, having higher classes per week, being forced to work and having sufficient income.

The present study showed significantly higher in young aged teachers, which is consistence with Alsadi's; contrary to his study, ours showed more BS in females than males, while Alsadi's, Unterbrink's, and Correa-Correa's studies BS was reported more in males (Correa-Correa et al., 2010; Unterbrink et al., 2007; Al-Asadi et al., 2018), on the other hand, other studies showed higher BS in females than males as in (Lau et al., 2005; Zhang et al., 2014). However, some studies showed no statistical significance difference between males and females (Luk et al., 2010; Jamshidirad et al., 2012). This inconsistency in the literature might result from the difference in the work environment, income and financial compensation.

The existing literature showed no clear cut-off in marital status and burnout. The present study showed no statistical significance difference between married and single teachers in relation to BS, which is in accordance with Sonnentag's, and Mukundan's (Mukundan et al., 2010; Sonnentag et al., 2010). On the other hand, Alsadi's study showed lower BS in married teachers, while others showed the opposite (Luk et al., 2010; Al-Asadi et al., 2018). Interestingly, teachers who thought their income was sufficient had significantly higher BS scores than those with insufficient, while Luk's study stated that (Luk et al., 2010) come satisfaction has an insignificant association with BS.

Regarding work overload, we found a significant association between the number of weekly classes and BS. This finding is in line with Alsadi's, Sonnentag's and Mukundan's (Mukundan et al., 2010; Sonnentag et al., 2010; Al-Asadi et al., 2018). Our results suggested that years of service were not associated with BS. In the present study, there was no statistically significant association between BS and years of service, which disagrees with Alsadi's study (Al-Asadi et al., 2018). Other factors, such as chronic diseases, social problems and the thought of being forced to work, were also significantly associated with BS. The current study did not evaluate student related factors such as misbehaviour and high student numbers per class. And BS in relation to depression and anxiety disorder may impact the quality of student education.

5. CONCLUSION

In conclusion, BS is high among school teachers, as 36% of respondents reported high emotional exhaustion scores (BS). Such findings suggest implementing teacher mental well being programs to improve the education process. Future prospective national studies are required to measure the extent of BS.

Limitations

The current study's limitations are its retrospective nature, convenient sample technique and self administered questionnaire; the result may change with a larger population.

Acknowledgement

We thank the participants who were all contributed samples to the study.

Ethical approval

The study was approved by the Medical Ethics Committee of Umm Al-Qura University (Ethical approval code: HAPO -02-K-012-2022-03-1005).

Informed consent

Informed consent was obtained from all individual participants included in the study.

Authors' contributions

The authors confirm contribution to the paper as follows: Study conception and design: Ethar Alsulami, Raghad saleh, Faisal Alghamdi; data collection: Ethar Alsulami, Raghad saleh, Faisal Alghamdi, Mohammad Almatrafi, Renad Alamoudi, Ghadeer Sadaqa; analysis and interpretation of results: Jumanah Althagafi, Mohammad Almatrafi; draft manuscript preparation: Ethar Alsulami, Raghad saleh, Faisal Alghamdi, Mohammad Almatrafi, Renad Alamoudi, Ghadeer Sadaqa, jumanah Althagafi; revisions to scientific content of manuscript: Reda Goweda. All authors reviewed the results and approved the final version of the manuscript.

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Conflict of interest

The authors declare that there is no conflict of interests.

Data materials availability

All data associated with this study will be available based on the reasonable request to corresponding author.

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